Applicant(s): Arthur ASHMAN Serial No.: 10/630,549 Group Art Unit: 3763

Filed: July 29, 2003 Examiner: Laura A. Bouchelle

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A syringe and nozzle tip assembly, comprising:

a syringe having a syringe barrel with a front end and a rear end, a piston slidably

mounted in the syringe barrel, and a plunger connected to the piston and extending rearwardly

through the rear end of the syringe barrel; and

a nozzle tip having a flange, a sleeve frictionally mounted on the front end of the

syringe barrel, and a neck with a curved portion and a curved passage having a curved axis therethrough, wherein the flange includes a recess disposed therein and a filter mounted in the

recess.

Claim 2 (Original): The syringe and nozzle tip assembly of claim 1, wherein the filter comprises a

screen and the screen and curved neck portion are integral with the nozzle tip.

Claim 3 (Original): The syringe and nozzle tip assembly of claim 2, wherein the screen has a mesh

size of about 105 microns.

Claim 4 (Original): The syringe and nozzle tip assembly of claim 1, wherein the outer surface of

the syringe barrel is substantially smooth.

Claim 5 (Original): The syringe and nozzle tip assembly of claim 1, wherein the recess and filter

are configured so that the filter does not contact the end of the syringe barrel.

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Claim 6 (Original): The syringe and nozzle tip assembly of claim 1, wherein the syringe barrel is

transparent.

Claim 7 (Original): The syringe and nozzle tip assembly of claim 1, wherein the syringe barrel is

made of a material selected from the group consisting of glass and plastic.

Claim 8 (Original): The syringe and nozzle tip assembly of claim 1, wherein the nozzle tip and

filter are made of low density polyethylene.

Claim 9 (Original): The syringe and nozzle tip assembly of claim 1, wherein the nozzle tip is

adapted to retain bone regeneration material in the syringe barrel.

Claim 10 (Original): The syringe and nozzle tip assembly of claim 1, wherein the flange includes a

surface adapted to seat against the syringe barrel when mounted thereon.

Claim 11 (Original): The syringe and nozzle tip assembly of claim 1, wherein the nozzle tip is

mounted solely by friction fit.

Claim 12 (Currently Amended): A syringe and nozzle tip assembly, comprising:

a syringe; and

a nozzle tip frictionally mounted on an end of the syringe, the nozzle tip comprising

a sleeve, a flange having a surface adapted to seat against the end of the syringe when the nozzle tip

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is mounted thereon and a recess disposed therein, a filter mounted in the recess, and a neck having a

curved portion and a curved passage having a curved axis extending therethrough,

Claim 13 (Original): The syringe and nozzle tip assembly of claim 12, wherein the nozzle tip is

mounted solely by friction fit.

Claim 14 (Original): The syringe and nozzle tip assembly of claim 12, wherein the filter is

removable.

Claim 15 (Currently Amended): A syringe and nozzle tip assembly, comprising:

a syringe; and

a nozzle tip mounted on an end of the syringe, the nozzle tip comprising a sleeve, a

flange having a surface adapted to seat against the end of the syringe when the nozzle tip is mounted

thereon and a recess disposed therein, a filter mounted in the recess, and a neck having a curved

portion and a <u>curved</u> passage <u>having a curved axis</u> extending therethrough, wherein the recess and

filter are configured so that the filter does not contact the end of the syringe.

Claim 16 (Original): The syringe and nozzle tip assembly of claim 15, wherein the filter is

removable.

Claim 17 (Original): The syringe and nozzle tip assembly of claim 15, wherein the nozzle tip is

mounted frictionally.

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Claim 18 (Original): The syringe and nozzle tip assembly of claim 17, wherein the nozzle tip is

mounted solely by friction fit.

Claim 19 (Currently Amended): A method of using [[the]] a syringe and nozzle tip assembly-of

elaim 1, the assembly comprising a syringe having a syringe barrel with a front end and a rear end, a

piston slidably mounted in the syringe barrel, a plunger connected to the piston and extending

rearwardly through the rear end of the syringe barrel, and a nozzle tip having a flange, a sleeve

frictionally mounted on the front end of the syringe barrel, and a neck with a curved portion and a

passage therethrough, wherein the flange includes a recess disposed therein and a filter mounted in

the recess, the method comprising:

providing an amount of granular bone regeneration material in the syringe barrel;

aspirating an amount of marrow blood from a surgical site in a patient through the

nozzle tip and into syringe barrel;

mixing the aspirated marrow blood with the bone regeneration material in the syringe

barrel until an amount of viscous mass of a mixture of bone regeneration material and marrow blood

has formed therein;

removing the nozzle tip from the front end of the syringe barrel; and

applying an amount of the viscous mixture to the surgical site.

Claim 20 (Previously Presented): The method of claim 19, further comprising expelling excess

marrow blood in the syringe barrel through the nozzle tip prior to removing the nozzle tip.

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Claim 21 (Currently Amended): A method of using [[the]] a syringe and nozzle tip assembly-of

elaim 12, the assembly comprising a syringe and a nozzle tip frictionally mounted on an end of the

syringe, the nozzle tip comprising a sleeve, a flange having a surface adapted to seat against the end

of the syringe when the nozzle tip is mounted thereon and a recess disposed therein, a filter mounted

in the recess, and a neck having a curved portion and a passage extending therethrough, the method

comprising:

providing an amount of granular bone regeneration material in the syringe;

aspirating an amount of marrow blood from a surgical site in a patient through the

nozzle tip and into syringe;

mixing the aspirated marrow blood with the bone regeneration material in the syringe

until an amount of viscous mass of a mixture of bone regeneration material and marrow blood has

formed therein;

removing the nozzle tip from the syringe; and

applying an amount of the viscous mixture to the surgical site.

Claim 22 (Previously Presented): The method of claim 21, further comprising expelling excess

marrow blood in the syringe through the nozzle tip prior to removing the nozzle tip.

Claim 23 (Currently Amended): A method of using [[the]] a syringe and nozzle tip assembly-of

elaim 15, the assembly comprising a syringe and a nozzle tip mounted on an end of the syringe, the

nozzle tip comprising a sleeve, a flange having a surface adapted to seat against the end of the

syringe when the nozzle tip is mounted thereon and a recess disposed therein, a filter mounted in the

recess, and a neck having a curved portion and a passage extending therethrough, wherein the recess

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and filter are configured so that the filter does not contact the end of the syringe, the method comprising:

providing an amount of granular bone regeneration material in the syringe;

aspirating an amount of marrow blood from a surgical site in a patient through the nozzle tip and into svringe:

mixing the aspirated marrow blood with the bone regeneration material in the syringe until an amount of viscous mass of a mixture of bone regeneration material and marrow blood has formed therein;

removing the nozzle tip from the syringe; and
applying an amount of the viscous mixture to the surgical site.

Claim 24 (Currently Amended): The method of claim [[21]]23, further comprising expelling excess marrow blood in the syringe through the nozzle tip prior to removing the nozzle tip.